

Air and Water Pollution in the Lower Yakima Valley- Who Pays?

Friends of Toppenish Creek, January 2025

Concentrated Animal Feeding Operations (CAFOs) emit air pollutants and discharge pollutants to ground and surface waters. This is well established.¹ There are significant costs involved as society attempts to address that pollution. This paper looks at the Lower Yakima Valley (LYV) and attempts to answer the questions: Who pays to address LYV groundwater pollution? Who benefits from pollution? Who suffers from pollution?

1. Background:

About 37% of WA dairy cows are housed in a 273 square mile area known as the Lower Yakima Valley Groundwater Management Area (LYV GWMA) where the average concentration of Nitrate-N in GWMA dedicated monitoring wells is 13.9 mg/L. Safe Nitrate-N levels for drinking water are currently 10 mg/L. On a national level there are efforts to reduce that standard to 5 mg/L. In Oregon State, whenever groundwater nitrate levels reach 7 mg/L, the state is required to establish a groundwater management area.

Note: The LYV GWMA monitoring network does not include measurements on and downgradient from a cluster of dairies where U.S. Environmental Protection Agency (EPA) research has found nitrate levels as high as 234 mg/L Nitrate-N. Consequently, the average Nitrate-N level of 13.9 mg/L in the LYV is underestimated.

Nitrate pollution of LYV groundwater is directly traceable to CAFO dairies, an industry that adds millions to the Yakima County economy, while simultaneously polluting the air and water.

So far, officials ignore research by the WA State Dept. of Health that found higher methemoglobin levels in babies fed formula when their formula was re-constituted with water containing elevated nitrates.² There was a dose response. To review – Hemoglobin in the bloodstream carries oxygen to the body and the brain. Methemoglobin does not carry oxygen. Methemoglobin displaces hemoglobin in the bloodstream.

2. What does it take for dairies to generate a profit? Here is a short list:

¹ See Attachment 2

² VanDerslice, J. (2007). Final Report: Dose-Response of Nitrate and Other Methemoglobin Inducers of Methemoglobin Levels of Infants. [Final Report | Dose-Response of Nitrate and Other Methemoglobin Inducers on Methemoglobin Levels of Infants | Research Project Database | Grantee Research Project | ORD | US EPA](#)

- A. Lots of water. A high producing milk cow needs 4.5 to 5 lbs. of water for every pound of milk produced. Support animals (bulls, heifers, calves) need a gallon of water per day for every 100 lbs. of animal body weight.
- B. Cheap labor. It is in the dairy industry's best interest to keep the LYV population relatively poor so there is a ready source of workers at the low end of the pay scale.
- C. Low educational attainment in LYV schools provides new workers who do not have the skills to succeed at schools of higher learning.
- D. Subsidies. The federal government covers about 45% of the costs for producing U.S. dairy products.³
- E. Minimal regulation. The Yakima Regional Clean Air Agency does not regulate emissions from Yakima County dairies. Less than 10% of WA dairies have National Pollutant Discharge Elimination System (NPDES) permits.

3. Providing Clean Drinking Water:

Based on recent statements, it appears that Yakima County Commissioners believe it is prudent for Washington state taxpayers to cover costs related to groundwater pollution.⁴

Alternatively, dairies could be compelled to pay for the pollution they cause. This is actually required by law. The EPA and the U.S. Dept. of Justice have sued the LYV cluster dairies to compel them to pay for bottled water and reverse osmosis water treatment in an impacted area that extends three miles downgradient from the LYV cluster dairies.

But, according to meeting notes, the Yakima Dairy Federation representative on the LYV GWMA Implementation team believes, "heavy handed efforts by EPA is (are) not helping."

And the Capital Press says, "The EPA has unnecessarily alarmed residents and undermined confidence in the county's efforts to test wells and supply drinking water, according to (a) statement by (Yakima County Commissioner) McKinney filed with the court."⁵

Currently residents pay around \$1 million out of pocket for bottled water. Every event in the LYV provides water in plastic bottles. The impact of all this plastic is seldom addressed.

³ CAFO Subsidies: Federal Support for the U.S. Dairy Industry. [SCLub Fact Sheet Dairy SubsidiesCVreview III .pdf](#)

⁴ Yakima Herald Republic. Yakima County issues reminder about ongoing water testing as judge denies stay in dairy case. Dec. 2024. [Yakima County issues reminder about ongoing water testing as judge denies stay in dairy case | Lower Valley | yakimaherald.com](#)

⁵ Capital Press. Yakima dairies suffer setback in 9th Circuit Court. Jan. 2025. [Yakima dairies suffer setback in 9th Circuit Court | Dairy | capitalpress.com](#)

The WA State Department of Health received \$800,000 in the last biennium to provide safe drinking water for impacted communities for two years.⁶ Will the legislature provide this funding every two years indefinitely?

4. What would it take to clean up the LYV aquifers?

- A. Install double thickness synthetic liners with leak detection systems beneath all manure lagoons. This is expensive, but the Natural Resource Conservation Service (NRCS) provides large subsidies for lagoon liners. About 10% of LYV manure lagoons have synthetic liners.
- B. Make sure that all applications of manure as fertilizer are done at agronomic rates. Currently there is no regulation of manure and fertilizer application on non-dairy fields. Other farmers benefit from free or inexpensive manure fertilizer, and no one asks whether they apply manure at agronomic rates.
- C. Require Washington CAFOs to obtain National Pollutant Discharge Elimination System Permits (NPDES permits) and enforce compliance with those permits. NPDES permits are the best tools available for enforcement of the Clean Water Act.
- D. Return inspections and permitting of CAFO dairies under the Clean Water Act to the Dept. of Ecology.
- E. Restrict construction of new CAFOs or expansion of existing CAFOs in areas where groundwater Nitrate-N levels are high.

5. What is currently being done?

A. Agencies provide band aids by delivering bottled water to affected residents and sometimes installing reverse osmosis units at homes. Meanwhile, the City of Mabton is nearly out of options for providing safe drinking water for residents. In 2023 Mabton drilled a new municipal well, well #6, that delivered water with 17 mg/L Nitrate-N.⁷

B. WSDA has hired an agronomist specifically to work with LYV farmers regarding the application of manure and fertilizer to cropland.⁸ Ecology has added a staff person to assist with the administration of NPDES permits for CAFOs. The South Yakima

⁶ LYV GWMA Implementation Team. Meeting Summary Minutes and Notes. [Meetings & Summaries | Yakima County, WA](#)

⁷ Yakima Herald Republic. State officials, nonprofits step up efforts in Mabton after new well strikes out. Nov. 2023. [State officials, nonprofits step up efforts in Mabton after new well strikes out | Lower Valley | yakimaherald.com](#)

⁸ LYV GWMA Implementation Team. Minuting Summaries and Notes. [Meetings & Summaries | Yakima County, WA](#)

Conservation District, with a board of directors that is 60% dairy people, has added a staff person to assist with dairy programs. These are no penalties for failure to follow recommendations.

6. Other costs for taxpayers that support CAFOs in Yakima County include:

- A. \$2.3 million for the LYV GWMA program that lasted from 2012 to 2019. Costs borne by advisory committee participants, plus ongoing costs for GWMA implementation are extra.
- B. Costs for South Yakima Conservation District (SYCD) programs are almost entirely dedicated to dairy support services. The SYCD annual budget is half a million dollars a year.
- C. Costs to drill new wells when wells run dry or deliver contaminated water are between \$20,000 and \$50,000 per well.
- D. Costs to administer Ecology's NPDES program for CAFOs – Although the law says these costs are supposed to be covered by permit fees, Ecology did not increase fees for dairies between 2003 and 2023, Consequently the NPDES program for CAFOs is underfunded and subsidized by the taxpaying public.
- E. Monies from the Climate Commitment Act that should be dedicated to green energy are diverted to production of biofuels such as manure methane.
- F. WSDA expenditures support the dairy industry. A recent FTE has the specific job of helping LYV dairies manage manure.
- G. Millions of \$ in public and private funding supports dairy research at WA State University. Much of that research focuses on manure management. Funding to demonstrate the benefits of biodiversity is minimal by comparison.
- H. In 2023 U.S.D.A. commodity programs paid Yakima dairies \$3,271,019.⁹

7. Who suffers from pollution? Over 80% of the people who are impacted by the excessive amounts of manure stored and applied in the LYV are people of color, and the population has an average income well below the state average, or the average for other parts of Yakima County. People in the LYV cannot even enjoy the simple pleasure of background barbecues due to pervasive air pollution from CAFO dairies. This is an unaddressed Environmental Justice issue.

Buffers to protect rivers and streams from runoff and pollutants in groundwater recharge are inadequate and often missing. The WA Dairy Federation actively opposes efforts to

⁹ Environmental Working Group Farm Subsidy Data Base. [EWG Farm Subsidy Database || Washington Conservation Database](#)

improve buffers.¹⁰ Consequently, in the long term, aquatic life suffers. The Yakima River suffers.

8. Conclusion: CAFO dairies reap huge profits by implementing practices that pollute the air and water. Few CAFO dairies even apply for NPDES permits. Taxpayers cover most costs to provide safe drinking water, to address health impacts from pollution, to clean up the aquifers, rivers, and streams. At the same time, taxpayers prop up the dairy industry. If the EPA/DOJ lawsuit is successful dairies will pay for bottled water and reverse osmosis in one smaller part of the LYV GWMA.

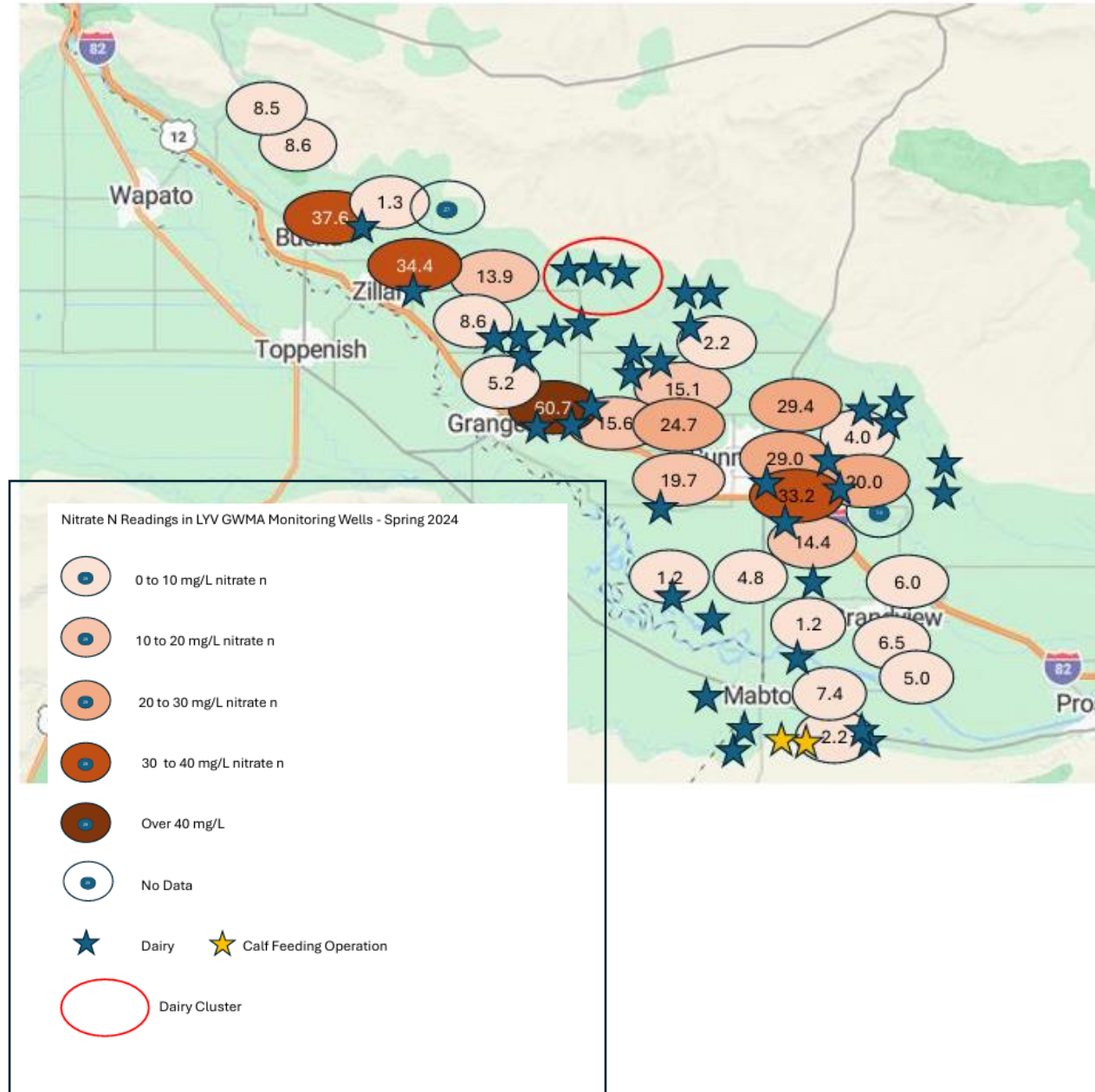
Thank you for reading.

Friends of Toppenish Creek

¹⁰ WA State Dairy Federation. Legislative News. 2022. [Legislative News | Washington State Dairy Federation](#)

Attachment 1

Nitrate-N Levels in Lower Yakima Valley Groundwater Management Area monitoring wells in the Spring of 2024, and locations of CAFO dairies in South Yakima County



Attachment 2: CAFOs Impact on the Environment and Communities

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U.S. Environmental Protection Agency Region X. Lower Yakima Valley Groundwater Management. [Lower Yakima Valley Groundwater | US EPA](#)